



**UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration**

*National Marine Fisheries Service*

*P.O. Box 21668*

*Juneau, Alaska 99802-1668*

June 16, 2004

Herb Klassen  
Major Projects Review Unit  
Oceans, Habitat and Enhancement Branch  
Fisheries and Oceans Canada  
200-401 Burrard Street  
Vancouver, British Columbia  
Canada V6C 3S4

RE: Tulsequah Chief Outstanding Issues

Dear Mr. Klassen:

Thank you for including the National Marine Fisheries Service (NMFS) in the May 28, 2004 interagency conference call to discuss the status of the Tulsequah Chief Mine Project on the Taku River in British Columbia, Canada, and soliciting our input on outstanding issues regarding the future of the project. Although NMFS has not been significantly involved in reviews of the project to date, we appreciate your offer to provide input at this time. NMFS is concerned that the project may adversely affect significant commercial, recreational and subsistence salmonid resources of the Taku River. These risks and resources are detailed in the State of Alaska's October 24, 2001 "White Paper, State of Alaska Comments on the Tulsequah Chief Mine Proposal." We understand that the State of Alaska may be reassessing its position on the Tulsequah Chief Mine project. Nevertheless, NMFS considers the white paper an adequate summary of the potential risks of the project to living marine resources and their habitats. NMFS defers issues of water quality analyses to the representatives of the U.S. Environmental Protection Agency, who were also a participant on the May 28, 2004 conference call.

At this stage of the review process you are seeking input on the April 23, 2004 Redfern Resources Ltd. (Redfern) response to "Outstanding Issues Regarding Proposed Tulsequah Chief Project." In addition, you have indicated that the Department of Fisheries and Oceans, Canada (DFO) is seeking conclusive advice regarding the Tulsequah Chief Project, meaning that you are seeking final positions on the project based on existing information.

General Comments

NMFS understands the need for conclusive advice at this stage of the review process, but agrees with you that additional information is needed on the stability of the Shazah fan, based on field work to be conducted during the spring and summer of 2004. You have indicated that this information is expected to be available and analyzed in time to be incorporated into your Environmental Assessment conclusions. We agree with this approach to project assessment.

In addition, additional information is needed from Redfern regarding placement of the causeway



in the Tulsequah River floodplain as described in Redfern's April 23, 2004 response to outstanding issues for item #13. Redfern should provide the specific cost-benefit analysis calculations they reference in this response to illustrate their assertion that the upland route would be prohibitively expensive. This cost-benefit analysis should include the cost of habitat compensation and/or enhancement that may be required by DFO for this segment of road. Both DFO and Redfern may find a similar Alaska example helpful for comparison. Alaska's Department of Transportation determined that a section of the Haines Highway would be more cost-effective in the Klehini River floodplain. An extensive mitigation and enhancement project, including monitoring, was implemented to compensate for encroachment on the floodplain. The project included extension of a clearwater stream for salmonid spawning and rearing habitat, and adjacent wetland creation. Based on predictions of groundwater infiltration from the Klehini, a compensatory wetland was also included in the design. Unfortunately, the dynamic behavior of the Klehini River did not result in groundwater infiltration as predicted, and the wetland was not established as expected. The Klehini example illustrates the unpredictable nature of floodplains as dynamic environments, which should be acknowledged and taken into account for this project as well.

NMFS encourages DFO and Redfern to incorporate into the Tulsequah Chief project the watershed planning efforts underway for the Taku River as an ongoing commitment to responsible operation of the project. We also encourage DFO and the appropriate Canadian representatives to provide information about the status of the Tulsequah Chief Mine developments, as needed or requested, to the Pacific Salmon Commission and its sub-bodies, particularly the Northern Panel.

NMFS' overall conclusion for this project is that the outstanding issues can be resolved while maintaining the health and integrity of aquatic resources in the Taku River. However, such an outcome will depend entirely on the diligence of Redfern and the government of Canada to ensure that adequate stipulations are attached to the project and implemented by the applicant, and that the remaining important details of project implementation are diligently and thoroughly pursued.

### Specific Comments

The successful resolution of a number of fisheries concerns in Redfern's April 23, 2004 response to outstanding issues is dependent on specifics not yet outlined in that document. DFO will need to carefully consider these gaps in information to successfully permit, monitor and compensate habitat impacts of the project. These areas that need to be further defined include:

Page 5, in response to Issue number 4: Will the river training works, to possibly consist of riprap groins, be left in place after completion of the project or removed? Where will the stockpile of riprap be placed, and will any remaining riprap be removed from the project site upon completion?

Page 9, in response to Issue number 11: Redfern states that the recommended pipes and weights for the effluent discharge system are "inert and will not cause distress to the environment if left

in place”, and that “the exfiltration system will be buried beyond the depth of scour and, once installed, is not expected to surface”. Redfern then states that “If there are valid technical objections to leaving the buried pipe in place, the pipe and weights could be removed with stipulated protective procedures for installation.” The burden of proof should be on Redfern to document the possible effects of the pipe being left in place in perpetuity. Short of relative certainty that the system would remain stable in perpetuity, it should be removed upon completion of the project.

Thank you for the opportunity to comment. If you have any questions, please contact Linda Shaw at (907) 586-7636.

Sincerely,

A handwritten signature in dark ink, appearing to read 'J. Balsiger', written over the printed name.

James W. Balsiger  
Administrator, Alaska Region